In [11]:
```
from matplotlib.font_manager import findfont, FontProperties
```

In [12]:
```
import matplotlib.pyplot as plt
```

In [13]:
```
import pandas as pd
```

In [14]:
```
data = {
"名稱":["客戶A","客戶B","客戶A","客戶B","客戶A","客戶B","客戶A","客戶A",],
"編號":["訂單1","訂單1","訂單2","訂單3","訂單2","訂單2","訂單1","訂單3"],
"數量":[4,4,1,2,3,4,2,1],
"售價":[495,496,360,451,221,321,466,260]}
```

In [15]:
```
data
```

Out[15]:
```
{'名稱': ['客戶A', '客戶B', '客戶A', '客戶B', '客戶A', '客戶B', '客戶A', '客戶A'],
 '編號': ['訂單1', '訂單1', '訂單2', '訂單3', '訂單2', '訂單2', '訂單1', '訂單3'],
 '數量': [4, 4, 1, 2, 3, 4, 2, 1],
 '售價': [495, 496, 360, 451, 221, 321, 466, 260]}
```

In [16]:
```
df = pd.DataFrame(data)
df
```

Out[16]:

	名稱	編號	數量	售價
0	客戶A	訂單1	4	495
1	客戶B	訂單1	4	496
2	客戶A	訂單2	1	360
3	客戶B	訂單3	2	451
4	客戶A	訂單2	3	221
5	客戶B	訂單2	4	321
6	客戶A	訂單1	2	466
7	客戶A	訂單3	1	260

In [17]:
```
df.groupby("名稱").sum()
```

Out[17]:

名稱	數量	售價
客戶A	11	1802
客戶B	10	1268

In [18]:
```
products = {"channel":["網路","網路","電視","電視","郵購","郵購"],
            "company":["EFS","Momo","EHS","Viva","Momo","EFS"],
            "sales":[11.22,23.50,12.99,15.95,25.75,11.55]}
oridnals = ['A','B','C','D','E','F']
df2 = pd.DataFrame(products,index = oridnals)
print(df2)
```

```
  channel company  sales
A      網路     EFS  11.22
B      網路    Momo  23.50
C      電視     EHS  12.99
D      電視    Viva  15.95
E      郵購    Momo  25.75
F      郵購     EFS  11.55
```

In [19]:
```
score = [4,5,6,7,5,8]
df2["score"] = score #df2 上一次就有
df2
```

Out[19]:

	channel	company	sales	score
A	網路	EFS	11.22	4
B	網路	Momo	23.50	5
C	電視	EHS	12.99	6
D	電視	Viva	15.95	7
E	郵購	Momo	25.75	5
F	郵購	EFS	11.55	8

In [20]:
```
pivot_tb = df2.pivot_table(index="channel",columns="company",values="sales
pivot_tb #pivot 翻轉
```

Out[20]:

company	EFS	EHS	Momo	Viva
channel				
網路	11.22	NaN	23.50	NaN
郵購	11.55	NaN	25.75	NaN
電視	NaN	12.99	NaN	15.95

In [21]:
```
df2.describe() #describe
```

Out[21]:

	sales	score
count	6.000000	6.000000
mean	16.826667	5.833333
std	6.307547	1.471960
min	11.220000	4.000000
25%	11.910000	5.000000
50%	14.470000	5.500000
75%	21.612500	6.750000
max	25.750000	8.000000

In [22]:
```
df2.plot(kind='bar')
```

Out[22]: <AxesSubplot:>